

**WEST**☐ **Generate Collection**

L4: Entry 10 of 54

File: USPT

Oct 31, 2000

US-PAT-NO: 6141737

DOCUMENT-IDENTIFIER: US 6141737 A

TITLE: Method for dynamically and efficiently caching objects received from an application server by a client computer by subdividing cache memory blocks into equally-sized sub-blocks

DATE-ISSUED: October 31, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Krantz; Jeffrey Isaac	Boca Raton	FL	N/A	N/A
Bloomfield; Marc Alan	Lighthouse Point	FL	N/A	N/A
Luu; Thanh	Sunrise	FL	N/A	N/A

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Citrix Systems, Inc.	Ft. Lauderdale	FL	N/A	N/A	02

APPL-NO: 9/ 433679

DATE FILED: November 4, 1999

## PARENT-CASE:

RELATED APPLICATIONS This application is a continuation of U.S. patent application Ser. No. 08/541,128, filed on Oct. 11, 1995.

INT-CL: [7] G06F 12/00

US-CL-ISSUED: 711/171; 711/129, 711/136, 711/203, 711/202, 709/200

US-CL-CURRENT: 711/171; 709/200, 711/129, 711/136, 711/202, 711/203

FIELD-OF-SEARCH: 711/170, 711/171, 711/172, 711/173, 711/118, 711/129, 711/3, 711/202, 711/203, 711/133, 711/136, 707/205, 709/200

## PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

☐ Search Selected☐ Search ALL

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> <u>3596257</u>	July 1971	Patel	340/172.5
<input type="checkbox"/> <u>4013828</u>	March 1977	Judice	358/133
<input type="checkbox"/> <u>4322795</u>	March 1982	Lange et al.	364/200
<input type="checkbox"/> <u>4395754</u>	July 1983	Feissel	364/200
<input type="checkbox"/> <u>4410916</u>	October 1983	Pratt et al.	358/263
<input type="checkbox"/> <u>4430712</u>	February 1984	Coulson et al.	364/300
<input type="checkbox"/> <u>4463424</u>	July 1984	Mattson et al.	364/300

<input type="checkbox"/>	<u>4499499</u>	February 1985	Brickman et al.	358/263
<input type="checkbox"/>	<u>4503501</u>	March 1985	Coulson et al.	364/300
<input type="checkbox"/>	<u>4562423</u>	December 1985	Humblet	340/347
<input type="checkbox"/>	<u>4691281</u>	September 1987	Furui	364/200
<input type="checkbox"/>	<u>4701871</u>	October 1987	Sasaki et al.	364/718
<input type="checkbox"/>	<u>4779189</u>	October 1988	Legvold et al.	364/200
<input type="checkbox"/>	<u>4899149</u>	February 1990	Kahan	341/67
<input type="checkbox"/>	<u>4905141</u>	February 1990	Bremza	364/200
<input type="checkbox"/>	<u>4949281</u>	August 1990	Hillenbrand et al.	364/518
<input type="checkbox"/>	<u>4992954</u>	February 1991	Takeda et al.	364/518
<input type="checkbox"/>	<u>5103303</u>	April 1992	Shoji et al.	358/75
<input type="checkbox"/>	<u>5115479</u>	May 1992	Murayama	382/56
<input type="checkbox"/>	<u>5231697</u>	July 1993	Yamada	395/142
<input type="checkbox"/>	<u>5233701</u>	August 1993	Nakata	395/425
<input type="checkbox"/>	<u>5269003</u>	December 1993	Roskowski et al.	395/166
<input type="checkbox"/>	<u>5309555</u>	May 1994	Akins et al.	395/157
<input type="checkbox"/>	<u>5339411</u>	August 1994	Heaton, Jr.	395/600
<input type="checkbox"/>	<u>5351129</u>	September 1994	Lai	348/584
<input type="checkbox"/>	<u>5357623</u>	October 1994	Megory-Cohen	395/425
<input type="checkbox"/>	<u>5390318</u>	February 1995	Ramakrishnan et al.	395/425
<input type="checkbox"/>	<u>5394531</u>	February 1995	Smith	395/425
<input type="checkbox"/>	<u>5426752</u>	June 1995	Takahasi et al.	395/400
<input type="checkbox"/>	<u>5434992</u>	July 1995	Mattson	395/425
<input type="checkbox"/>	<u>5455576</u>	October 1995	Clark, II et al.	341/50
<input type="checkbox"/>	<u>5473742</u>	December 1995	Polyakov et al.	395/142
<input type="checkbox"/>	<u>5491808</u>	February 1996	Geist, Jr.	395/427
<input type="checkbox"/>	<u>5537551</u>	July 1996	Denenberg et al.	395/200.18
<input type="checkbox"/>	<u>5537635</u>	July 1996	Douglas	395/456
<input type="checkbox"/>	<u>5561786</u>	October 1996	Morse	395/497.01
<input type="checkbox"/>	<u>5566288</u>	October 1996	Koerhsen	395/142
<input type="checkbox"/>	<u>5566302</u>	October 1996	Khalidi et al.	709/312
<input type="checkbox"/>	<u>5572206</u>	November 1996	Miller et al.	341/51
<input type="checkbox"/>	<u>5579507</u>	November 1996	Hosouchi et al.	395/497.02
<input type="checkbox"/>	<u>5588138</u>	December 1996	Bai et al.	711/173
<input type="checkbox"/>	<u>5651136</u>	July 1997	Denton et al.	395/445
<input type="checkbox"/>	<u>5652854</u>	July 1997	Wong	395/416
<input type="checkbox"/>	<u>5717893</u>	February 1998	Mattson	395/456
<input type="checkbox"/>	<u>5758085</u>	May 1998	Kouoheris et al.	709/231

<input type="checkbox"/> 5771034	June 1998	Gibson	345/141
<input type="checkbox"/> 5835959	November 1998	McCool et al.	711/171

## FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
0684583A2	November 1995	EPX	
0684582A3	September 1997	EPX	
WO94/03853	February 1994	WOX	

## OTHER PUBLICATIONS

"The Norton Utilities Version 5.0 Disk Explorer," 1990, pp. 28-54.  
"Modern Operating Systems," Andrew S. Tanenbaum, 1992, pp. 74-93.  
"The Waite Group's Programming Using Turbo C++," Robert Lafore, 1990, p. 423.  
"Patents on Data Compression Algorithms," pp. 1-10, (website) printed out on Jan. 4, 1998.

ART-UNIT: 271  
PRIMARY-EXAMINER: Chan; Eddie P.  
ASSISTANT-EXAMINER: Kim; Hong  
ATTY-AGENT-FIRM: Testa, Hurwitz & Thibault, LLP

## ABSTRACT:

A method for dynamically caching data objects in a logical cache memory begins by organizing the logical cache memory into a set of maximally equally-sized, contiguous pages that begin at a logical cache base address. Any one of the maximal size logical cache pages may be dynamically subdivided into a set of smaller pages of equal size. The smaller size pages cache data objects having a smaller size than the

maximum possible data object size. Each subdivided page stores only those smaller size data objects. The logical address for a page is mapped to at least a maximal size page index identifying the position of the maximal size logical page in the cache and, if the page is a smaller size page, the page location is also mapped to a smaller size page index which identifies a particular one of the smaller size pages located within a maximal size page. Pages are dynamically reconfigured based on a least-recently-used policy. A maximal size page may be reconfigured to provide for storage of multiple smaller sized pages and a set of smaller sized pages may be reconfigured to provide storage for a maximal size page. In one aspect, maximally sized pages may be chained together to provide for storage of data objects which exceed the size of the pages. Chained pages may be contiguous or non-contiguous.

23 Claims, 17 Drawing figures

**WEST**

Generate Collection

L4: Entry 12 of 54

File: USPT

Oct 3, 2000

US-PAT-NO: 6128655

DOCUMENT-IDENTIFIER: US 6128655 A

TITLE: Distribution mechanism for filtering, formatting and reuse of web based content

DATE-ISSUED: October 3, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Fields; Duane Kimbell	Austin	TX	N/A	N/A
Hassinger; Sebastian	Blanco	TX	N/A	N/A
Hurley, II; William W.	Round Rock	TX	N/A	N/A

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
International Business Machines Corporation	Armonk	NY	N/A	N/A	02	

APPL-NO: 9/ 113678

DATE FILED: July 10, 1998

INT-CL: [7] G06F 13/00

US-CL-ISSUED: 709/219; 709/225, 707/501

US-CL-CURRENT: 709/219; 707/501, 709/225

FIELD-OF-SEARCH: 709/202, 709/203, 709/205, 709/217, 709/219, 709/223, 709/225, 709/227, 709/310, 707/10, 707/501

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> 4586158	April 1986	Brandle	N/A
<input type="checkbox"/> 5196838	March 1993	Meier et al.	N/A
<input type="checkbox"/> 5598188	January 1997	Gove et al.	N/A
<input type="checkbox"/> 5602997	February 1997	Carpenter et al.	N/A
<input type="checkbox"/> 5673322	September 1997	Pepe et al.	N/A
<input type="checkbox"/> 5704017	December 1997	Heckerman et al.	N/A
<input type="checkbox"/> 5706502	January 1998	Foley et al.	N/A
<input type="checkbox"/> 5706507	January 1998	Schloss	N/A
<input type="checkbox"/> 5708780	January 1998	Levergood et al.	N/A
<input type="checkbox"/> 5855020	December 1998	Kirsch	707/10
<input type="checkbox"/> 5918010	June 1999	Appleman et al.	709/203
<input type="checkbox"/> 5918013	June 1999	Mighdoll et al.	709/217
<input type="checkbox"/> 5987606	November 1999	Cirasole et al.	713/200
<input type="checkbox"/> 5991760	November 1999	Gauvin et al.	707/10
<input type="checkbox"/> 6009429	December 1999	Greer et al.	707/10

## FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
WO9726729	December 1996	EPX	
WO9727553	January 1997	EPX	

## OTHER PUBLICATIONS

Digestor: Device-Independent Access To The World Wide Web  
 (http://www.fxpall.xerox.com/papers/bic97).

IBM Technical Disclosure Bulletin, vol. 40 No. 12 p. 143, Dec. 1997--Look Ahead  
 Filtering of Internet Content.

IBM Technical Disclosure Bulletin, vol. 40 No. 12 p. 181, Dec. 1997--Filtering  
 Internet Content.

IBM Technical Disclosure Bulletin, vol. 40 No. 12 pp.5-8, Dec. 1997--Method for  
 Dynamically Routing Web Requests to Different Web Servers.

IBM Technical Disclosure Bulletin, vol. 40 No. 07 pp. 1-4, Jul. 1997--Service to  
 Enable Common Gateway Interface Programs within Tivoli Management Environment  
 Netfinity Based Internet Applications.

ART-UNIT: 278  
 PRIMARY-EXAMINER: Vu; Viet D.  
 ATTY-AGENT-FIRM: LaBaw; Jeffrey S.

## ABSTRACT:

The invention provides an automated system for replicating published web content and associated advertisements in the context of a hosting web site. At the hosting web site, the invention includes the process of brokering a client browser's request for a web page, analyzing the returned content and splitting it into component elements, extracting the desired component elements, recasting the desired elements in the look and feel of the hosting site and sending the recast content to the requesting client as a web page. Once the reformatted file is received at the client, the client browser interprets the HTML in the web page, presenting the content in the context of the hosting web site. On the content provider's web site, the details of the transaction in the web server logs are preserved, proxying a direct page view and ad impression.

37 Claims, 11 Drawing figures

**WEST**

Generate Collection

L4: Entry 18 of 54

File: USPT

Jul 25, 2000

US-PAT-NO: 6094662

DOCUMENT-IDENTIFIER: US 6094662 A

TITLE: Apparatus and method for loading and reloading HTML pages having cacheable and non-cacheable portions

DATE-ISSUED: July 25, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hawes; Michael Kerrigan	Pittsford	NY	N/A	N/A

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Xerox Corporation	Stamford	CT	N/A	N/A	02

APPL-NO: 9/ 069819

DATE FILED: April 30, 1998

INT-CL: [7] G06F 7/00

US-CL-ISSUED: 707/104; 709/218

US-CL-CURRENT: 707/104; 709/218

FIELD-OF-SEARCH: 709/218, 707/104

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

Search Selected

Search ALL

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> <u>5715453</u>	February 1998	Stewart	707/104
<input type="checkbox"/> <u>5737592</u>	April 1998	Nguyen et al.	707/104
<input type="checkbox"/> <u>5737599</u>	April 1998	Rowe et al.	707/104
<input type="checkbox"/> <u>5793966</u>	August 1998	Amstein et al.	704/4
<input type="checkbox"/> <u>5802520</u>	September 1998	Jerkunica et al.	707/101
<input type="checkbox"/> <u>5894554</u>	April 1999	Lowery et al.	709/203
<input type="checkbox"/> <u>5946697</u>	August 1999	Shen	707/104

## OTHER PUBLICATIONS

Xerox: CentreWare Internet Services, Docuprint, Nov. 2, 1997, 98 pgs.  
"Official Netscape Navigator Gold 3.0 Book"--Alan Simpson ISBN 1-56604-420-0,  
Copyright 1996, 934 pgs.

ART-UNIT: 278

PRIMARY-EXAMINER: Maung; Zarni

ASSISTANT-EXAMINER: Gebremeskel; Yeshi

ATTY-AGENT-FIRM: Oliff & Berridge, PLC

ABSTRACT:

On an embedded device with a web server, pages are marked as having non-cacheable HTML portions and cacheable graphics portions. Marking the HTML portion as non-cacheable allows for the retrieval of a web page containing the latest status information without retrieving the graphics images. A refresh function is provided that allows for the comparing of non-cached portion time stamps with the stamps of the page on the web server. When the time stamp of the page on the web server is more current than the time stamp of the non-cached portion, the non-cacheable portion of the web page is retrieved from the web server. Retrieving the non-cacheable HTML portion from the web site without retrieving the cached portion reduces the amount of time needed to refresh the display image. A timer may be employed to refresh the web page at predetermined intervals, while using the current URL or the history list of the browser to reach the desired web site and retrieve the current status of the embedded device. The refresh function may be activated by a button available on the browser or by a refresh button on the web page.

4 Claims, 6 Drawing figures



**WEST**☐ **Generate Collection**

L4: Entry 19 of 54

File: USPT

Jul 4, 2000

US-PAT-NO: 6085226

DOCUMENT-IDENTIFIER: US 6085226 A

TITLE: Method and apparatus for utility-directed prefetching of web pages into local cache using continual computation and user models

DATE-ISSUED: July 4, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Horvitz; Eric	Kirkland	WA	N/A	N/A

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Microsoft Corporation	Redmond	CA	N/A	N/A	02

APPL-NO: 9/ 007895

DATE FILED: January 15, 1998

INT-CL: [7] G06F 13/00

US-CL-ISSUED: 709/203

US-CL-CURRENT: 709/203

FIELD-OF-SEARCH: 364/DIG.1, 364/DIG.2, 709/200, 709/203, 709/217, 709/223

## PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

☐ **Search Selected**☐ **Search ALL**

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> <u>5572643</u>	November 1996	Judson	395/793
<input type="checkbox"/> <u>5727129</u>	March 1998	Barrett et al.	709/217
<input type="checkbox"/> <u>5802292</u>	September 1998	Mogul	709/203
<input type="checkbox"/> <u>5878223</u>	March 1999	Becker et al.	709/223

## OTHER PUBLICATIONS

Cunha et al. "Determining WWW User's Next Access and its Application to Pre-fetching" IEEE, pp. 6-11, Jun. 1997.Jiang et al. "Prefetching Links on the WWW" IEEE, pp. 483-489, Aug. 1997.  
Chapter Four "Processes and Threads" of H. Custer, Inside Windows NT (.COPYRGT.1993, Microsoft Press), pp. 83-97.

G. Cooper, "The Computational Complexity of Bayesian Inference Using Bayesian Belief Networks", Journal of Artificial Intelligence, 42(2):393-405, 1990.

P. Dagum et al, "Approximating Probabilistic Inference in Bayesian Networks is np-hard", Journal of Artificial Intelligence, 60(1):141-153, 1993.

D. Heckerman et al, "Toward Normative Expert Systems: Part 1 The Pathfinder Project", Methods of Information in Medicine, 31:90-105, 1992.

M. Henrion et al, "Decision Analysis and Expert Systems", AI Magazine, 12:64-91,

Winter 1992.

E. Horvitz et al, "Flexible Computation for Value of Information in Diagnostic Reasoning", AAA Fall Symposium on Flexible Computation, AAAI, Menlo Park, CA, Nov. 1996.

E.J. Horvitz, et al, "Decision Theory in Expert Systems and Artificial Intelligence", International Journal of Approximate Reasoning, 2:247-302, 1988.

E.J. Horvitz, "Reasoning about beliefs and actions under computational resource constraints", Proceedings of Third Workshop on Uncertainty in Artificial Intelligence, pp. 429-444, Seattle, WA, Jul. 1987.

E.J. Horvitz, "Reasoning Under Varying and Uncertain Resource Constraints", Proceedings AAAI-88 Seventh National Conference on Artificial Intelligence, Minneapolis, MN, pp. 111-116, Morgan Kaufmann, San Mateo, CA, Aug. 1988.

E.J. Horvitz, "Rational Metareasoning and Compilation for Optimizing Decisions under Bounded Resources", Proceedings of Computational Intelligence 89, Milan, Italy.

M. Shwe, et al, "Probabilistic Diagnosis Using a Reformulation of the Internist-1/QMR Knowledge Base-ii: Evaluation of Diagnostic Performance", Method of Information in Medicine, 30:256-267, 1991.

ART-UNIT: 278

PRIMARY-EXAMINER: Harrell; Robert B.

ATTY-AGENT-FIRM: Michaelson & Wallace Michaelson; Peter L.

#### ABSTRACT:

A technique that, through continual computation, harnesses available computer resources during periods of low processing activity and low network activity, such as idle time, for prefetching, e.g., web pages, or pre-selected portions thereof, into local cache of a client computer. This technique utilizes a probabilistic user model to specify, at any one time, those pages or portions of pages that are likely to be prefetched given, e.g., a web page currently being rendered to a user, which promise to provide the largest benefit (expected utility) to the user. Specifically, once a user, at a client computer, enters an address of a desired web page, a set containing web addresses of web pages, that based on the user model are each likely to be accessed next by that user, are determined, with corresponding files therefor prefetched, in order of their expected utility to the user, by the client computer during intervals of low processing activity and low network activity. Expected utility of a page or portion is assessed as a product of rate of refinement in utility of that page or portion to the user multiplied by its transition probability. Once prefetched, these pages or portions are stored in local cache at the client computer for ready access should the user next select any such page or portion.

202 Claims, 26 Drawing figures

**WEST**[Generate Collection](#)**Search Results - Record(s) 21 through 40 of 54 returned.**☐ 21. Document ID: US 6067565 A

L4: Entry 21 of 54

File: USPT

May 23, 2000

US-PAT-NO: 6067565

DOCUMENT-IDENTIFIER: US 6067565 A

TITLE: Technique for prefetching a web page of potential future interest in lieu of continuing a current information download

DATE-ISSUED: May 23, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Horvitz; Eric	Kirkland	WA	N/A	N/A

US-CL-CURRENT: 709/218; 709/223, 709/234

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 22. Document ID: US 6061715 A

L4: Entry 22 of 54

File: USPT

May 9, 2000

US-PAT-NO: 6061715

DOCUMENT-IDENTIFIER: US 6061715 A

TITLE: Apparatus and method for loading and reloading HTML pages having cacheable and non-cacheable portions

DATE-ISSUED: May 9, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hawes; Michael Kerrigan	Pittsford	NY	N/A	N/A

US-CL-CURRENT: 709/203; 707/10, 709/217

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 23. Document ID: US 6055569 A

L4: Entry 23 of 54

File: USPT

Apr 25, 2000

US-PAT-NO: 6055569

DOCUMENT-IDENTIFIER: US 6055569 A

TITLE: Accelerating web access by predicting user action

DATE-ISSUED: April 25, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
O'Brien; Michael David	Bellevue	WA	N/A	N/A
Gravestock; Peter Gerard	Redmond	WA	N/A	N/A

US-CL-CURRENT: 709/223; 709/203, 709/224

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWMC	Draw Desc	Image
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☐ 24. Document ID: US 6055572 A

L4: Entry 24 of 54

File: USPT

Apr 25, 2000

US-PAT-NO: 6055572

DOCUMENT-IDENTIFIER: US 6055572 A

TITLE: System and method for creating pathfiles for use to predict patterns of web surfaces

DATE-ISSUED: April 25, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Saksena; Gagan	Mountain View	CA	N/A	N/A

US-CL-CURRENT: 709/224; 709/219, 709/223

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWMC	Draw Desc	Image
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☐ 25. Document ID: US 6035281 A

L4: Entry 25 of 54

File: USPT

Mar 7, 2000

US-PAT-NO: 6035281

DOCUMENT-IDENTIFIER: US 6035281 A

TITLE: System and method of multiparty billing for Web access

DATE-ISSUED: March 7, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Crosskey; James P.	Ridgefield	CT	N/A	N/A
Mei; Mark Gee-Gwo	Yorktown Heights	NY	N/A	N/A
Ragavan; Harish	Stamford	CT	N/A	N/A
Wu; Kun-Lung	Yorktown Heights	NY	N/A	N/A
Yu; Philip Shi-lung	Chappaqua	NY	N/A	N/A

US-CL-CURRENT: 705/14; 705/40

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWOC	Draw Desc	Image
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☐ 26. Document ID: US 6029175 A

L4: Entry 26 of 54

File: USPT

Feb 22, 2000

US-PAT-NO: 6029175

DOCUMENT-IDENTIFIER: US 6029175 A

TITLE: Automatic retrieval of changed files by a network software agent

DATE-ISSUED: February 22, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chow; Yen-whei	San Jose	CA	N/A	N/A
Hayes-Roth; Frederick A.	Atherton	CA	N/A	N/A
Jacobstein; Neil A.	Palo Alto	CA	N/A	N/A
Manley; James E.	San Jose	CA	N/A	N/A
McMahan; Christopher B.	Cupertino	CA	N/A	N/A

US-CL-CURRENT: 707/104; 707/10, 707/200, 707/201, 707/203, 709/202, 709/203

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWOC	Draw Desc	Image
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☐ 27. Document ID: US 6023726 A

L4: Entry 27 of 54

File: USPT

Feb 8, 2000

US-PAT-NO: 6023726

DOCUMENT-IDENTIFIER: US 6023726 A

TITLE: User configurable prefetch control system for enabling client to prefetch documents from a network server

DATE-ISSUED: February 8, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Saksena; Gagan	Mountain View	CA	N/A	N/A

US-CL-CURRENT: 709/219; 709/232, 709/310

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 28. Document ID: US 6021470 A

L4: Entry 28 of 54

File: USPT

Feb 1, 2000

US-PAT-NO: 6021470

DOCUMENT-IDENTIFIER: US 6021470 A

TITLE: Method and apparatus for selective data caching implemented with noncacheable and cacheable data for improved cache performance in a computer networking system

DATE-ISSUED: February 1, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Frank; Richard	Groton	MA	N/A	N/A
Arun; Gopalan	Nashua	NH	N/A	N/A
Anderson; Richard	Nashua	NH	N/A	N/A
Mediouni; Rabah	Nashua	NH	N/A	N/A
Klein; Stephen	Hollis	NH	N/A	N/A

US-CL-CURRENT: 711/138; 707/201, 709/203, 709/213, 711/118, 711/130, 711/133, 711/136, 711/139, 711/154, 711/159, 711/160

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 29. Document ID: US 6012067 A

L4: Entry 29 of 54

File: USPT

Jan 4, 2000

US-PAT-NO: 6012067  
DOCUMENT-IDENTIFIER: US 6012067 A

TITLE: Method and apparatus for storing and manipulating objects in a plurality of relational data managers on the web

DATE-ISSUED: January 4, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sarkar; Shyam Sundar	San Mateo	CA	94403	N/A

US-CL-CURRENT: 707/103; 703/3, 703/4, 707/10, 707/104, 707/201, 709/203, 709/229, 713/200, 713/201

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 30. Document ID: US 6009410 A

L4: Entry 30 of 54

File: USPT

Dec 28, 1999

US-PAT-NO: 6009410  
DOCUMENT-IDENTIFIER: US 6009410 A

TITLE: Method and system for presenting customized advertising to a user on the world wide web

DATE-ISSUED: December 28, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
LeMole; Suzanne L.	Murray Hill	NJ	N/A	N/A
Nurenberg; Steven Howard	Manalapan	NJ	N/A	N/A
O'Neil; Joseph Thomas	Staten Island	NY	N/A	N/A
Stuntebeck; Peter H.	Little Silver	NJ	N/A	N/A

US-CL-CURRENT: 705/14; 379/201, 705/1, 707/102, 709/219

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 31. Document ID: US 6006034 A

L4: Entry 31 of 54

File: USPT

Dec 21, 1999

US-PAT-NO: 6006034  
DOCUMENT-IDENTIFIER: US 6006034 A

TITLE: Systems and methods for automatic application version upgrading and maintenance

DATE-ISSUED: December 21, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Heath; Clifford	Mount Waverly	N/A	N/A	AUX
Port; Graeme	Surrey Hills	N/A	N/A	AUX
Klos; Steven	Nashua	NH	N/A	N/A
Greenhill; Graeme	Londonderry	NH	N/A	N/A

US-CL-CURRENT: 717/11

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 32. Document ID: US 6006264 A

L4: Entry 32 of 54

File: USPT

Dec 21, 1999

US-PAT-NO: 6006264  
DOCUMENT-IDENTIFIER: US 6006264 A

TITLE: Method and system for directing a flow between a client and a server

DATE-ISSUED: December 21, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Colby; Steven	Billerica	MA	N/A	N/A
Krawczyk; John J.	Arlington	MA	N/A	N/A
Nair; Raj Krishnan	Acton	MA	N/A	N/A
Royce; Katherine	Manchester	NH	N/A	N/A
Siegel; Kenneth P.	Nashua	NH	N/A	N/A
Stevens; Richard C.	Littleton	MA	N/A	N/A
Wasson; Scott	Shrewsbury	MA	N/A	N/A

US-CL-CURRENT: 709/226; 709/220, 709/240

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 33. Document ID: US 5991810 A

L4: Entry 33 of 54

File: USPT

Nov 23, 1999



US-PAT-NO: 5991810  
DOCUMENT-IDENTIFIER: US 5991810 A

TITLE: User name authentication for gateway clients accessing a proxy cache server

DATE-ISSUED: November 23, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Shapiro; Mark L.	Los Altos	CA	N/A	N/A
Subramaniam; Anand	San Jose	CA	N/A	N/A
Muthumavadi; Muthukumar	Santa Clara	CA	N/A	N/A

US-CL-CURRENT: 709/229; 707/1, 707/10, 707/9, 709/202, 709/203, 709/217, 713/202

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 34. Document ID: US 5987233 A

L4: Entry 34 of 54

File: USPT

Nov 16, 1999

US-PAT-NO: 5987233  
DOCUMENT-IDENTIFIER: US 5987233 A

TITLE: Comprehensive global information network broadcasting system and implementation thereof

DATE-ISSUED: November 16, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Humphrey; Douglas Edward	Laurel	MD	N/A	N/A

US-CL-CURRENT: 709/217

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 35. Document ID: US 5961602 A

L4: Entry 35 of 54

File: USPT

Oct 5, 1999

US-PAT-NO: 5961602  
DOCUMENT-IDENTIFIER: US 5961602 A

TITLE: Method for optimizing off-peak caching of web data

DATE-ISSUED: October 5, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Thompson; Joseph Raymond	Round Rock	TX	N/A	N/A
Berstis; Viktors	Austin	TX	N/A	N/A

US-CL-CURRENT: 709/229; 709/218, 711/124

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 36. Document ID: US 5935207 A

L4: Entry 36 of 54

File: USPT

Aug 10, 1999

US-PAT-NO: 5935207

DOCUMENT-IDENTIFIER: US 5935207 A

TITLE: Method and apparatus for providing remote site administrators with user  
hits on mirrored web sites

DATE-ISSUED: August 10, 1999

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Logue; Jay D.	San Jose	CA	N/A	N/A
Mighdoll; Lee S.	San Francisco	CA	N/A	N/A

US-CL-CURRENT: 709/219; 709/203, 711/118

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 37. Document ID: US 5937421 A

L4: Entry 37 of 54

File: USPT

Aug 10, 1999

US-PAT-NO: 5937421

DOCUMENT-IDENTIFIER: US 5937421 A

TITLE: Methods, systems and computer program products for performing interactive  
applications in a client-server based dialog system

DATE-ISSUED: August 10, 1999

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Petrov; Tzvetan	Heidelberg	N/A	N/A	DEX
Richstein; Hans-Jurgen	Schwetzingen	N/A	N/A	DEX
Wittmann; Holger	Dossenheim	N/A	N/A	DEX

US-CL-CURRENT: 707/526

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 38. Document ID: US 5926789 A

L4: Entry 38 of 54

File: USPT

Jul 20, 1999

US-PAT-NO: 5926789  
DOCUMENT-IDENTIFIER: US 5926789 A

TITLE: Audio-based wide area information system

DATE-ISSUED: July 20, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Barbara; Daniel	Mercer County	NJ	N/A	N/A
Naqvi; Shamim A.	Morris County	NJ	N/A	N/A

US-CL-CURRENT: 704/270.1; 704/272

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KMC	Draw Desc	Image
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☐ 39. Document ID: US 5898833 A

L4: Entry 39 of 54

File: USPT

Apr 27, 1999

US-PAT-NO: 5898833

DOCUMENT-IDENTIFIER: US 5898833 A

TITLE: Method and apparatus for increasing the effective bandwidth of video sequences transmitted over a network by using cached data

DATE-ISSUED: April 27, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kidder; Jeff	Hillsboro	OR	N/A	N/A

US-CL-CURRENT: 709/234

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KMC	Draw Desc	Image
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☐ 40. Document ID: US 5892946 A

L4: Entry 40 of 54

File: USPT

Apr 6, 1999

US-PAT-NO: 5892946

DOCUMENT-IDENTIFIER: US 5892946 A

TITLE: System and method for multi-site distributed object management environment

DATE-ISSUED: April 6, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Woster; George W.	Dallas	TX	N/A	N/A
Linares; Melissa A.	Plano	TX	N/A	N/A
Shah; Mahesh V.	Plano	TX	N/A	N/A

US-CL-CURRENT: 709/316

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	K000C	Draw Desc	Image
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Generate Collection

Terms	Documents
l3 and (content or history or profile or path or site or address).ti,ab,clm.	54

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Display

20

Documents, starting with Document:

41

**Display Format:** CIT

Change Format

**WEST****End of Result Set**

Generate Collection

L7: Entry 1 of 1

File: USPT

Oct 24, 2000

US-PAT-NO: 6138141DOCUMENT-IDENTIFIER: US 6138141 A

TITLE: Server to client cache protocol for improved web performance

DATE-ISSUED: October 24, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
DeSimone; Antonio	Ocean	NJ	N/A	N/A
Sibal; Sandeep	Matawan	NJ	N/A	N/A

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
AT&T Corp	New York	NY	N/A	N/A	02

APPL-NO: 8/ 733486

DATE FILED: October 18, 1996

## PARENT-CASE:

CROSS REFERENCE TO RELATED APPLICATIONS This application relates to subject matter described in U.S. patent application Ser. No. 08/733,485, now U.S. Pat. No. 5,787,470, filed simultaneously herewith, for Antonio DeSimone, David H. Shur, and Sandeep Sibal, the first and third named inventors therein being co-inventors herein, and assigned to the assignee hereof.

INT-CL: [7] G06F 13/00

US-CL-ISSUED: 709/203; 709/213, 711/124, 711/130, 711/146, 711/147, 710/203, 710/10

US-CL-CURRENT: 709/203; 707/10, 707/203, 709/213, 710/10, 711/124, 711/130, 711/146, 711/147

FIELD-OF-SEARCH: 395/200.33, 395/200.53, 395/200.43, 395/200.46, 711/124, 711/130, 711/147, 711/121, 711/141, 711/146, 707/10, 707/203

## PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> <u>4855906</u>	August 1989	Burke	707/10
<input type="checkbox"/> <u>5151989</u>	September 1992	Johnson et al.	707/10
<input type="checkbox"/> <u>5265235</u>	November 1993	Sindhu et al.	711/120
<input type="checkbox"/> <u>5303362</u>	April 1994	Butts, Jr. et al.	711/121
<input type="checkbox"/> <u>5581704</u>	December 1996	Barbara et al.	711/141
<input type="checkbox"/> <u>5734898</u>	March 1998	He	707/203
<input type="checkbox"/> <u>5787470</u>	July 1998	DeSimone et al.	711/124
<input type="checkbox"/> <u>5793965</u>	August 1998	Vanderbilt et al.	709/203
<input type="checkbox"/> <u>5835908</u>	November 1998	Bennett et al.	707/10
<input type="checkbox"/> <u>5905492</u>	May 1999	Straub et al.	345/333

## FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
10198634	July 1997	JPX	
11120048	October 1997	JPX	

ART-UNIT: 272

PRIMARY-EXAMINER: Peikari; B. James

## ABSTRACT:

On the Internet (106), rather than retrieving a frequently requested Web object from its originating server (105) in response to a request from a client terminal (101, 102), the object rather can be retrieved from a cache (103) within the Internet Access Service Provider (IASP) (104), which connects the client terminal to the Internet. What is stored in the cache may, however, not be the most recent version of the object. Distinct from providing the Web object itself, information about changes to the object is provided by the server in response to a cache request that is asynchronous to a request from a client for the object. Such information about changes to an object includes the date and time when the object was last modified, the byte size of the modified object, and information on the type of content of the object. After receiving this information about changes to an object, the cache may then request that a copy of the object be downloaded to it.

15 Claims, 4 Drawing figures